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IN THE SPECIFICATION

Please amend the first full paragraph on page 6 as follows:

With reference to FIG. 1, an exemplary system for implementing the invention includes a general-purpose computing device in the form of a conventional personal computer 100, including a processing unit 102, a system memory 104, and a system bus 106 that couples various system components including the system memory 104 to the processing unit 102. The system bus 106 may be any of several types of bus structures including a memory bus or memory controller, a peripheral bus, and a local bus using any of a variety of bus architectures. The system memory includes read only memory (ROM) 110 and random access memory (RAM) 112. A basic input/output system (BIOS) 114, containing the basic routines that help to transfer information between elements within the personal computer 100, such as during start-up, is stored in ROM 110. The personal computer 100 further includes a hard disk drive 116 for reading from and writing to a hard disk (not shown), a magnetic disk drive 118 for reading from or writing to a removable magnetic disk 120, and an optical disk drive 122 for reading from or writing to a removable optical disk 124 (such as a CD-ROM or other optical media). The hard disk drive 116, magnetic disk drive 118 and optical disk drive 122 are connected to the system bus 106 by a hard disk drive interface 126, a magnetic disk drive interface 128 and an optical disk drive interface 130, respectively. The drives and their associated computer-readable media provide nonvolatile storage of computer readable instructions, data structures, program modules and other data for the personal computer 100.

Please amend the last paragraph on page 9, starting at line 29 and continuing to page 10, line 10, as follows:

FIG. 3 is a general block diagram illustrating a method and system for self-calibrating the catadioptric camera system 200 using the sequence of omni-directional images 250 in accordance with the present invention. In particular, the image detector 210 obtains the sequence of omni-directional images 250 of the scene. This sequence of omni-directional images 250 includes several individual images 300 ranging from image(1) to image(N). The sequence of omni-directional images 250 is sent to a tracker 310 that detects features (such as points, lines and planes) within the sequence of omni-directional images 250 and tracks the positions of these features across the sequence 250. A self-calibration module 320 of the present invention receives the tracked features provided by the tracker 310 and, as explained in detail below, determines calibration parameters for the catadioptric camera system 200. These calibration parameters are sent as output (box 330) for use by the catadioptric camera system 200 for providing accurate imaging results.